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EXCREMENTAL DISEASES: THEIR CAUSATION AND THEIR PREVENTION BY HYGIENIC MEANS.

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THE processes by which we are to seek our end are chiefly mechanical. They call for the services of the mason and the plumber rather than for those of the doctor. But the mason and the plumber have to be taught to do their work, and the employer is, above all, to be taught the necessity of having it done, and of having it properly done. There is no class of the community so well situated, in all respects, to give this instruction, and to enforce it, as the members of the medical profession. The health officer, the sanitarian, and the paragraphist may do much in the slow work of awakening public opinion; but the family physician speaks with the voice of authority. His prescription for the removal of the sources of foul air will produce an effect which can be produced in no other way so surely.

It may seem at first sight as something beyond the limit of a physician's duties to do work which should have been done by the architect and the city engineer; but if we consider that his first and greatest duty is to exert himself to the utmost for the prevention of disease, we shall see that he can no more transfer his responsibility to the architect than, in the curing of disease, he can transfer it to the apothecary. To continue the comparison, it is no more important that he should understand therapeutics for the direction of the apothecary, than that he should understand sanitary construction for the direction of the plumber and the mason. He need not, of course, concern himself with the mechanical processes by which they do their work, but he should know the objects their work is to serve, and the efficiency with which these are secured.

The essential features of the subject relate to (1) the removal of fæcal matter by interior drainage pipes where water-closets are used within the house; (2) the management of out-of-door privies; (3) the condition of sewers where these are used; (4) the means of final disposal.

I. It is not necessary for our illustration to use, as is customary, the

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[1] Concluded from page 197.

aggravated example of a house in which the most glaring defects of drainage are obvious, — where traps have been omitted, where soil-pipes leak, and where an imperfect drain fills the cellar with sewer gas. This is only an exaggeration of difficulties which exist almost everywhere. It will serve our purpose almost equally well to consider a house of the very best class, where all the appliances for the removal of wastes are constructed in the most thorough and workman-like manner. As we have now to do only with the question of human excrement, we will leave out of consideration the deleterious effect of kitchen wastes, washing wastes, etc. We will assume, for the moment, that the house drain is so arranged as not to bring back into the house the foul air of the public sewer, and will confine our attention to the waste-pipes of the house itself, and to the dangers created within them by those fæcal matters which, *inter alia*, it is their office to remove. Beginning at the outer wall, we find an iron pipe with a depression known as a "trap" to prevent the return of currents of air from without. This pipe passes under a cemented cellar floor to a point near the interior of the building, thence it turns upward to a water-closet on the main floor, and thence continues to other closets on higher floors, the vertical direction usually being broken by longer or shorter lateral runs, according to the relative positions of closets on the different floors. It is made of heavy cast-iron, five or six inches in diameter, and its points are well secured with molten lead thoroughly and tightly caulked. The uppermost closet is attached to the top of this pipe by a four-inch lead pipe bent into the shape of the letter S. A similarly bent lead pipe connects the lower closets with oblique branches of the iron pipe. Other branches pass under the cellar floor to receive the wastes of kitchen and laundry. In communication with the water-closet on each floor is a bath-tub and stationary wash-basin, whose outlet pipes, running together and discharging as one, deliver into the water of the water-closet trap, the bent lead pipe. Variously scattered about the house are other wash-basins, in bedrooms or dressing-closets. In one or more cases there is a urinal, discharging in like manner. Just above the top of the iron pipe, branching out from the lead pipe with which the water-closet is connected, there rises a small lead pipe, which passes through the roof of the house to act as a "ventilator." Frequently the wastes of bath-tubs, basins, etc., deliver, not into the trap of the water-closets, but into the lead pipe beyond the trapping water, — practically into the iron pipe itself. In such cases some form of trap, usually an S-shaped bend, is placed under each vessel, with a view to preventing the air of the drain from gaining access to the apartments. The workmanship and material are of the best and most costly character, and everything has been done that the employer and his architectural adviser and mechanics have known how to do to make the whole perfectly safe.

Let us now examine the hidden processes going on within these pipes, and their probable effect upon the atmosphere which the occupants of the house have to breathe day and night. The quantity of water discharged and the frequency of the discharge insure the constant filling of the main trap near the outer wall, so that no current of air can enter from without. The pipe, from its too great size, inadequately flushed by the emptying of bath-tubs and basins, has the walls even of its vertical portions smeared with excrement. Its lateral courses, between the floors and under the cellar bottom, are still more fouled by the same material. The frequent introduction of warm water into this pipe raises its temperature and hastens decomposition. Every channel of ingress is closed against the entrance of air, and whatever fermenting principle the fæcal matters may contain, whether common or specific, carries on its development (its growth) without the accession of sufficient oxygen, and produces fermentative decomposition. The resultant gases filling the confined space overflow through the small pipe to the top of the house, preventing the entrance of fresh air through that channel, as the constant overflow of a fermenting beer barrel prevents the entrance of oxygen through its restricted bung-hole. Under the best circumstances the foulest of substances is rotting within the pipe, and filling its whole space with putrid gases. Under the worst conditions the specific infection of enteric fever and its congeners is adding to this confined atmosphere the reproductive organisms of its unlimited growth. Were this pipe-confined air absolutely excluded from our houses, we should be as safe as good workmanship and sound material could make us. But, unfortunately, the only barrier between our living-rooms and the interior of this pestiferous and poisonous retort is by, at best, a few inches of water in our traps. Traps are subject to emptying by the process known as "siphoning out," and this process acts at times in an unaccountable and capricious manner; so that we can never be quite sure that at some point our only feeble safeguard has not been withdrawn, leaving us exposed to an invasion of gases, which are constantly being produced and which are constantly seeking means of outlet.

What is still more serious is that these safeguards are feeble, — extremely feeble. Nothing has been more clearly demonstrated than the universal permeability of water by all gases. A basin of water left to stand in a stinking atmosphere soon becomes stinking water. Removed in this condition to a sweet-smelling room, it will soon taint its atmosphere. If any gas possessing recognizable chemical qualities is introduced into one end of a bent pipe, — the bend being filled with water, — the chemical reaction of the gas may soon be detected in the other limb of the pipe. This is not a matter of opinion, but of carefully-conducted and oft-repeated experiment. In the search for the source of a distinctive drain odor, it is often traced to an outlet which is separated from the drain by an undisturbed water-seal. This condition, it is to be remembered, is due entirely to what takes place within the house itself, and has no connection with an invasion of *sewer* gas.

Aside from the difficulties and dangers arising from the restricted decomposition in the soil-pipe, there is another very serious difficulty whose seat is in the trap of the water-closet. This trap is of such capacity that the usual flushing supply of the closet is insufficient to change its contents. The stream flowing over the bend of the trap is too small to carry over the solid fæces, and these remain until, by decomposition or maceration, they can pass over in solution or admixture in the limited flow. While they remain, they are constantly evolving foul and more or less dangerous gases, which escape from the trapping water into the house. What are known as "pan" closets — which are by far the most largely used — have a hidden chamber, shut off on the one side by the water of the trap, and on the other by the water of the pan, the walls of which are coated with an accumulation of fæces, decomposing in an unventilated atmosphere, and preparing for emission into the house, at each opening of the pan, gases similar to those produced in the soil-pipe itself.

Where bath-tub and other wastes discharge into the water-closet trap, the frequent introduction of warm water lends great activity to the decomposition of the contained fæces and urine, with a corresponding exhalation through the bath and basin wastes.

The foregoing is by no means a complete catalogue of the evils of our best accepted systems of house drainage, even so far as fæcal influences are concerned. The large quantity of other decomposable organic matter subjected to the same influences increases the danger. As we descend the scale, and come to houses built with an eye to economy, and still lower to those built with an eye to cheapness, and to those built years ago, when architects and plumbers were more ignorant than they are now, we see at every step increasing need for professional vigilance and effort.

It would be out of place to enter here into the details of the house drainer's art. The following indication of the manner in which the defects of this house may be practically remedied, without renewing the work, will show in a general way the controlling principles. The application of these principles varies, of course, with the varying circumstances of each case, and it is to be governed by considerations which need not be recounted here.

The first object to be secured is a free circulation of pure atmospheric air through the whole length of the pipe, by the admission of fresh air by a pipe connecting the lower end of the system inside the trap with the outer air, and by continuing the iron pipe, full bore, up through the roof with an open mouth exposed to the wind. This will supply oxygen for the better decomposition of the foul coating of the pipe, will dilute the gases as they are formed, and will carry them off into the atmosphere. It is often practicable to ventilate in like manner some of the longer lateral waste-pipes. The foul chamber of the "pan" closet may have its condition greatly mitigated by pipes connecting its upper and lower parts with the outer air. It should be stated, however, that no water-closet now exists which is free from grave objections. Water-seal traps, although they may be so arranged as to prevent the siphoning referred to above, are never to be trusted, no matter how thoroughly the main pipe may be ventilated, because the best possible ventilation cannot make its contained air fit to be breathed, and because the impurities of this air will pass freely through the water. There are various devices by which the water-seal may be covered and protected against contact with the air of the drain, and one of these should always be adopted. Should the question be raised as to the ability of the ferments of infection to be transmitted through the water, it may be answered that such transmission is not essential to their fatal effect, for the reason that the water of a trap usually contains sufficient organic matter in solution to harbor these ferments, set up a new growth, and produce a fresh crop, to escape at the house end of the trap.

If to the evils indicated above we add the items of sewer gas coming from the street and of pressure originating in the street sewer, we shall perhaps come to a realization of the serious character of our task.

II. The vast majority of habitations in this country have no interior drainage whatever beyond a waste-pipe leading from the kitchen sink. The excrement of their inhabitants is deposited, except in case of severe illness, in the vault of an out-of-door privy, where it exercises its mischievous *rôle* in quite a different way. Our civilization is too far advanced for it to be necessary to recite to persons of even ordinary intelligence the methods of its deleterious action, — beginning with the stifling air of its superincumbent apartment, and ending with its oozings through the soil to taint the water of wells. The voice of the whole sanitary world is unanimously in favor of its abolition.

Among the various substitutes for this relic of ignorant and barbarous days, none has been found to serve nearly so good a purpose as what is known as the dry closet, — a sufficient amount of sifted dry earth or of coal ashes, or of a mixture of the two, being used to cover the dejections, absorb their moisture, and bring them into close contact with the concentrated oxygen of a porous material. The use of portable vessels in all cases of serious illness is common where there are no interior water-closets, and no plan of absorption and disinfection has been devised at all comparable to the use of earth or ashes in these vessels. It is not too much to say that a proper and efficient adoption of this system in connection with vessels used in the sick-room suffices, as ample experience has demonstrated, entirely to prevent the spread of such diseases as find their means of transmission in the evacuations of the bowels.

III. Although of less consequence in its bearing upon health than the interior drainage of the house, the public sewer has an importance that can by no means be disregarded. It has been the custom to saddle it with the whole responsibility, and to consider the drainage of a house good or bad according to the degree to which it admitted or excluded the air of the sewer. A public sewer, holding the wash of many houses, is of course in itself worse than the single small drain of any one house; but, in view of its extent, of the motion which its constant though small stream must give to its contained air, and of its many channels of communication with house drains, street gullies, man-holes, and outlets, it must have a less important influence upon any single house — supposing, of course, that all are equally guarded by traps — than has the soil-pipe of that house. At the same time, the difference is one of degree, not of kind, and the public sewer, as generally constructed, has all of the inherent disadvantages of a foul cess-pool, with the added drawback that its air space is subject to more frequent fluctuations, and that its temperature changes more frequently and more suddenly. Like the cess-pool and the soil-pipe, it is the seat of fæcal decomposition, going on without the admission of a sufficient volume of fresh air.

The condition of public sewers has long been discussed, and the discussion still progresses, with the promise of an ultimate effect upon public sentiment. Reformation — which must be radical and complete — must involve enormous public expenditure. While physicians may greatly aid in bringing about the much-desired change, and while they already realize the importance of exerting themselves in this direction, it is not to be disputed that their most efficient service is to be rendered in connection with the reformation of individual houses, and in the enlightenment of both architects and their clients as to what is required in new construction.

It seems almost trite to recite here the generally recognized statement that the sewer should be as little as possible a *receptacle*, and as much as possible a *means of conveyance*, for house drainage; that whatever it receives it should pass on, — with no halting by the way, but with a continuous flow to its ultimate outlet. However completely this may be effected, there must still be a certain sliming and fouling of the walls of the sewer, and the matters thus adhering must be subject in such a temperature to constant decomposition. The condition is in all respects the same as that in the interior of the soil-pipe, and for the same reasons it needs the same constant circulation of fresh atmospheric air.

Concerning the cess-pools of single houses, or of groups of houses, all needed information is comprised in the single statement that they should be, everywhere and always, totally abolished. No cess-pool, whether so tight as to retain all that is delivered to it, or so porous as to leach away its liquid contents into the ground, can ever be, under any circumstances, a safe neighbor for an inhabited house.

IV. We have by no means averted the dangers which human excrement is capable of working when we have delivered it beyond the walls of the house or beyond the confines of the town. In either case we should, so far as possible, remove it to its ultimate point of delivery before it has had time even to begin its decomposition. But even then we have only changed its place, — we have not destroyed it; and while our danger has been lessened by distance, it has frequently been increased by accumulation.

The problem which now presents itself is one which has exercised the best engineering talent of the world, and no generally accepted solution has been reached. Two methods of ultimate disposal are accepted as satisfactory, but under many circumstances both are extremely difficult of application. One is the discharge into a great body of water, under circumstances which will surely prevent a return to the shore, by the action of eddies, currents, tides, or waves; the other is incorporation with aerated earth.

The first of these methods — discharge into the sea or into great lakes — has been and continues to be the subject of enlightened discussions, which are available to all interested in them. The second — incorporation with earth — has also been the subject of much study and experiment, but its features and conditions are less widely known. It comprises the whole range of processes, from the use of a quart of earth in a chamber vessel to the application of the whole sewage of a town to agricultural lands. In both cases the destructive agency upon which we rely is the concentrated oxygen which is crowded into the minute interstices of all porous material, and which is removed from the atmosphere as fast as it is taken up by the chemical processes of quick decay. If it is a question of disposing of the excreta of a single household, the application may best be made in the form of sifted dry earth at the source of production. If we are to consider also the disposal of other household wastes, including a large amount of liquid, then we shall require an area of ground equal to not less than two hundred square feet for each member of the family. The disposal in this case is effected through the medium of porous drains laid one foot or less below the surface of the ground, within reach of atmospheric influences, and, incidentally, within feeding range of the roots of plants. This method has been successfully adopted for the disposal in a single field of the sewage of one thousand persons. The degree to which it is capable of extension is a question of practice and of detail. The processes of intermittent surface irrigation, and, incidentally, for the fertilization of agricultural land, is susceptible of unlimited application, and although not always economical is always, under proper conditions as to soil drainage, entirely successful as a hygienic measure. A modification of this system, known as "intermittent downward filtration," secures the perfect accomplishment of the same result with a very much smaller ratio of land to population. In this process the soil is very thoroughly drained to a depth of six feet, with large pipes and copious outlets. The discharge upon the surface is very abundant, and the absorption and transmission are rapid. The permanent earth filter retains all organic impurities, the water being discharged at the outlet below as a potable and practically pure effluent.

In this latter case, as in all other methods of applying sewage to land, whether at the surface or through sub-surface irrigation drains, an intermittent supply is essential to success. A constant saturation soon leads to the fouling of the filter, to unwholesome interior decomposition, and to unpurified effluent. With a sufficient interval between periods of copious discharge, the oxidation of the retained impurities is carried to completion, and a purified filter is prepared for the next application. The infinitely minute division and distribution of the water-carried material makes the complete transformation a work of short duration. The mechanical and engineering appliances by which this system is carried out it would be out of place here to discuss; they have all been efficiently worked out, and have all been for years in regular and satisfactory operation. They constitute the only practicable alternative thus far devised to the usual system of discharge into the sea and into running streams, — a method which entails serious difficulties, which grow under our feet as we attempt to surmount them. How far disposal over or under the soil will be interfered with by the severity of our winters is perhaps not fully determined. It is known that even with surface irrigation the interference is much less than had been feared, and instances are common where, with an average depth of three feet of frost in the ground, the sub-surface irrigation pipes perform as well in winter as in summer.

In thus treating the question of sewage disposal, we have necessarily included all of the liquid wastes of the community; but their most serious and troublesome element is *human excreta*, which is our typical and by far most dangerous, as it is our most universal, product.

The attempt has been made in this essay to give, not so much a scientific statement of the theories concerning disease production through the agency of human excreta, of the pathological character of the diseases thus produced, and of the hygienic theories by which we are to account for successful methods of prevention, as a practical statement of the known facts connected with the subject, to indicate their bearings upon each other, and to use these in illustration and explanation of the methods which experience has shown to be effective in removing effect by the suppression of cause.

THE EVIDENCE OF STILL-BIRTH.[1]

BY MEDICAL EXAMINER S. W. ABBOTT, M. D.

HUMAN bodies come to the notice of the medical examiner at all periods of existence, from even the early stages of fœtal life down to old age. The transition from each of these so-called periods to the succeeding is, with one exception, so insensible and gradual as to be imperceptible. That exception is the stage of development which marks the passage from intra to extra uterine life. No preceding or subsequent stage of life is so sharply divided or so well defined as this. The sudden awakening of the human embryo to a new life in the outer world, attended as it is by a complete revolution in its condition, with the addition of respiration to its hitherto gradually acquired functions; the obliteration of old channels for the passage of vital fluids; the sudden and almost violent deprivation of its original blood supply by the division of the funis; the change from a uniform to a variable temperature, from a submerged life in fluid to one in air, — all these conditions render it a matter of wonder that so large a proportion survive the first moments of independent existence.

All still-births are in both a physical and in a legal sense deaths, and are so recognized by the State of Massachusetts in its official returns of cities and towns.[2] Of the forms of death which come to the notice of the medical examiner, the still-born and others occurring within the first week will necessarily form an important part,[3] and hence the question will often arise, "Was this infant born living or dead?"

In this connection, and in a consideration of the statutes, which are our rule of action, the question naturally arises, "What is, legally, a dead body?" The term *dead body of a person* occurs both in the old inquest law and in the new medical examiner law of 1877. But as no definition of the term *dead body* is given in the law, the interpretation must be somewhat at the discretion of each medical examiner.

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[1] Read at the February meeting of the Massachusetts Medico-Legal Society, 1879.

[2] Records of Massachusetts Medico-Legal Society, Corresponding Secretary.

[3] Autopsies of new-born children in Berlin constitute almost a fourth of all cases. Casper's Forensic Medicine, vol. iii.

So far as the dead bodies of fœtuses are concerned, even in the early stages of embryonic life, I know of no reason, under Massachusetts laws, why they should not *all* come under the cognizance of the medical examiner. Any attempt on our part to draw a line of distinction between the extremes of fœtal life would subject us to popular misapprehension, and make us guilty of the error of the British law, which established a distinction between the animate and the inanimate embryo,[1] a principle both morally and physiologically false. A fœtus is a person, a human being, physically, morally, and legally, and may inherit property, even during the earliest periods of embryonic life.[2]

While this is true, it is also necessary that any such child should be viable when born in order to *succeed* to an inheritance. Hence the question of viability may become a matter of vital importance in a given case, so far as inheritance is concerned, but under Massachusetts laws it cannot in any way affect the status of a case of fœticide or criminal abortion.

The examination of newly born infants requires a thorough knowledge of fœtal anatomy, and whenever an autopsy upon such a body is required it should be made with as much care and thoroughness as in the case of adults, certain organs requiring even more careful attention, as the lungs, heart, blood-vessels, stomach, colon, and funis.

How, then, may we know whether an infant has been born living or dead?

In many instances an autopsy will be imperative, provided other evidence, as that of an attending physician, is not at hand.

There are certain points in the *external inspection* of a new-born child which are of special importance in settling the question of its *maturity*, and this question of maturity may become the vital point at issue in a court of justice. It is therefore best to take note of every point, and while our decision may not be made up from any one alone, every item lends weight to the general result.

The following points, then, should be noted in the case of each new-born child found dead and coming to the notice of a medical examiner: —

Its *weight*. From such statistics as I have been able to collect, I find that the average weight of the new-born child at maturity is somewhat greater in the United States than it is in England and upon the continent of Europe.

Casper gives the weight of 247 cases as follows: —

Average weight, 247 infants	3309 grams.
Average weight of 130 males	3442 grams.
Average weight of 117 females	3192 grams.

The observations of Elsässer, Clark, Quetelet, Lecieux, and others give slight variations from these figures, none of them being quite as large as those of Casper.

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[1] Blackstone, vol. i., page 129.

[2] 15 Pickering's Reports, page 255.

Orth states the weight as 3300 for males, and 3250 for females.

The statistics of American-born children thus far obtained are meagre in the extreme. Dr. Burwell makes the following observation on 200 infants in the Philadelphia Hospital: —

100 males, average weight	3515 grams.
100 females, average weight	2961 grams.

Dr. Metcalf, of Mendon, gives the weight of 302 infants as follows: —

Average weight	3685 grams.
Average weight of males	3798 grams.
Average weight of females	3515 grams.

Through the kindness and assistance of members of the Middlesex East Medical Society I am enabled to give the weight of 203 infants born in that district: —

Average weight of 205 infants	3762 grams.
Average weight of males	3903 grams.
Average weight of females	3584 grams.

From various sources and not a very large aggregate of observations, I find an average for all classes in the United States to be about

3525 grams as an average for both sexes.
3650 grams as an average for males.
3400 grams as an average for females.

In London, from an average of 20,000 observations, Dr. Guy gives 3033 grams as the general average.

It is evident that the weight and also the length of new-born infants at maturity are influenced by various conditions, such as race, climate, and social standing. Most of the recorded statistics of foreign observers were compiled from observations made in maternity and lying-in hospitals in crowded cities, among a class of people considerably below the average social condition of the population at large.

The observations which I have quoted from Dr. Metcalf and the Middlesex East Medical Society were made in private practice in country and suburban villages, among a population of farmers, mechanics, laborers, and business men, representing a higher average class than the infants born in lying-in hospitals of large cities.

Length. The length of new-born infants at maturity presents but little variation. Caspar's measurements are: —

Average length of 247 infants	49.2 centimetres.
Average length of 130 males	51.8 centimetres.
Average length of 117 females	48.7 centimetres.

Dr. Burwell, of Philadelphia, gives the following: —

Average of 100 males	48.5 centimetres.
Average of 100 females	47.6 centimetres.

My own observations on this point are limited to seventeen mature infants, with this result: —

General average	49.9 centimetres.
Average of males	50⅓ centimetres.
Average of females	49 centimetres.

Here, then, is an open field of investigation, hitherto but little cultivated among American physicians, one which legitimately belongs to a medico-legal organization. Combining, as we do, the offices of obstetricians and medical examiners, scattered throughout the State, we are thus able to collect vital statistics, and to disseminate them through the medium of this society. Let me therefore earnestly recommend to you, as medical examiners, the habit of carefully observing these points, which at first thought appear of trivial and minor importance, but which the foremost forensic physicians of the Old World have carefully observed and recorded in thousands of cases. And I beg leave also to suggest that you take your observations, as soon after the birth as possible, upon the naked child. Your record will then have the merit of accuracy, and you will be spared the trouble of mentally subtracting the estimated weight of a mass of swaddling-bands and other paraphernalia to obtain the net weight of the child.

The *circumference of the thorax*, the *diameters of the cranium*, longitudinal, transverse, and oblique (occipito-mental), and the *size of the fontanelles* add weight to the former measurements.

The *condition and color of the skin* should be observed, whether firm or wrinkled, peeling in flakes, putrid, red, white, purple, or greenish. The scaling of the skin which takes place during the first few days after birth, usually beginning on the abdomen and spreading to other parts, is a vital phenomenon and a proof of live birth. It should be distinguished from the peeling produced by maceration.

Ecchymoses and post-mortem discolorations should be noted, and incised to determine the condition of the blood contained in them. The coverings or wrappings of the child, if any are present; marks of cords, bands, cloths, or violence of any sort; vernix caseosa, meconium, or fæcal stains, all require attention.

The following particulars are also worthy of note: —

The length and condition of the hair upon the scalp.

The condition of the eyes, absence or presence of the pupillary membrane. The condition of the eyeball, whether firm, flabby, opaque, or of a condition well described as buttery.

The condition of the cartilages of the nose and ears, and presence of foreign material in either, or in the cavity of the mouth.

The absence or presence of finger and toe nails, and their comparative length if present.

The condition of the scrotum, and position of the testicles in males and of the labia majora in females.

Of all *external conditions*, there is none more suggestive in its bearing upon one subject than that of the umbilical cord. Its absence or presence should be noted, and, if present, its condition of consistence, and whether it be desiccated or putrefied, moist or dry, cut or torn, tied or not tied, its length, and its coverings. If the funis is not present, the condition of the umbilicus, as to complete or incomplete cicatrization, suppuration, or hæmorrhage.

Various opinions have been held as to the desiccation or mummification of the cord in living infants. Some writers hold that it is a vital process. Doubtless, the separation of the cord at its proximal end, attended with suppuration and subsequent cicatrization of the umbilicus, is a vital process, but the vitality of any process beyond this point where circulation has ceased is a matter of doubt.

Billard states that desiccation is a vital process, and makes the following conclusions:[1] —

"(1.) Desiccation of the funis cannot take place except during life.

"(2.) At the period of death, desiccation is suspended or retarded.

"(3.) If the cord be fresh or shrinking, the infant may have been still-born, or have lived but a short time.

"(4.) If the cord has already exhibited the beginning of desiccation, or is completely dry, the infant has lived at least one day.

"In general, putrefaction of the cord does not begin till after the decomposition of other parts of the body, so that it is not found putrefied, unless the walls of the abdomen are green and all parts of the body are evidently in a state of putrefaction.

"The separation of the cord is by suppuration, or a process similar to that by which the stem of some fruits is separated."

Heat and moisture play an important part in the changes of the cord, whether upon the living or the dead infant. The influence of the temperature of the living infant upon the cord is a matter which, though neglected by most observers in forensic medicine, is worthy of notice. This temperature (37° C.) is much above that of the average temperature in which dead infants are usually found, except in hot summer days and in hot climates. The condition of the cord of dead infants varies with the surrounding temperature and other conditions. The bodies of such infants are found in all sorts of conditions: in solid, fluid, and semifluid media, in hot and cold weather, frozen or thawed, in the earth and out of it. The cord of a child which has been floating in a stream for several days in November will not present the same appearances as one which has been left dry for several days in an open pasture in a July sun.

For the purpose of noting some of these changes, I selected six pieces from a fresh umbilical cord on the 26th of December last. This cord was of an average size. The pieces were of equal length, six centimetres, and each weighed five and one third grams. They were exposed as follows: —

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[1] Traité des Maladies des Enfants, chapter on Umbilical Cord.

Three were laid in shallow capsules, and exposed in a dry condition, and marked *a*, *b*, and *c*.

Three were placed in open glasses filled with water, and marked *d*, *e*, and *f*.

A and *d* were kept at a temperature averaging about 0° C., *d* being occasionally covered with a film of ice; *d* and *e* were kept at an average temperature of 15° to 17° C.; *c* and *f* were kept at an average temperature of 37° to 39° C., a little above that of the human body.

(*a.*) At the end of forty-eight hours slight shrinking of size was first noticed in *a*. In seventy-two hours it had shrunk one fourth its size, and showed signs of desiccation. At the end of the first week it had shrunk two thirds of its size. At the end of the second week its weight was only forty-three centigrams, one thirteenth of its original size, and was dry, hard, odorless, translucent, and showing the tortuous course of the umbilical vessels with hardened blood in them. This appearance it still retains.

(*b.*) Shrinking was noticed in *b* in thirty hours, desiccation also during the second day, and at the end of the first week it had dried and assumed the same appearance which *a* showed at the end of two weeks, its weight then and now being forty-five centigrams.

(*c.*) Shrinking was first noticed in *c* at the end of ten hours, and in forty-eight hours desiccation was completed, it having then assumed its present size and weight of forty-six centigrams.

(*d.*) At the end of twelve hours *d* had swollen a little in size by imbibition of water. Its color was unchanged. A thin film of ice had formed over it. It was odorless, and remained so at the end of four weeks, still retaining the same appearance as at the end of twelve hours. There was no discoloration of the water.

(*e.*) The fragment marked *e* had swollen like *d* in twelve hours. There was an odor of putrescence at the end of the fourth day, and the water had become discolored with blood. This cord has retained its shape up to the present time, and the blood-vessels can still be seen at the ends of the cord. A pellicle of mold had formed over the water, containing organic *débris* and abundant infusoria. A stream of fresh water directed forcibly against this cord did not affect its shape at the end of four weeks.

(*f.*) A putrescent odor was decidedly manifest in *f* at the end of twelve hours, and the water was also discolored with blood. At the end of two weeks its shape was still unchanged. In three weeks the gelatinous envelope had fallen away from the blood-vessels, leaving them like long strings. In four weeks the whole mass was disorganized, leaving only a few bits of blood-vessels here and there retaining their original shape.

(To be continued.)

TWO CASES ILLUSTRATIVE OF TWO IMPORTANT POINTS IN ELECTRO-THERAPEUTICS.[1]

BY A. D. ROCKWELL, M. D., OF NEW YORK,

Electro-Therapeutist of the New York State Woman's Hospital, Member of the American Neurological Association, etc.

THESE cases are neither novel nor unusually interesting, so far as the symptoms of disease alone are concerned. I present them because they illustrate two very important points in therapeutics, especially electro-therapeutics, namely, the necessity for, and the good results that come from, perseverance in seemingly hopeless cases of infantile paralysis, and furnish a suggestion in regard to the differential indications for the use of galvanism and faradism in the relief of pain.

CASE I. I call attention first to this little boy, aged four, sent to me by Dr. S. H. McIlroy, of this city.

In September, 1877, the patient suffered from a severe attack of chills and fever, followed by convulsive seizures. One week subsequently the right leg was found to be completely paralyzed, the other limbs, with the exception of the left arm, being also affected, but in a less degree. In March, 1878, six months later, the case came under my care. The leg was apparently without life, quite cold, and atrophied to the last degree, while the electro-muscular contractility was completely abolished, and probably had been for some time. After a month's treatment by general faradization and localized galvanization, the general condition had somewhat improved, but there was not the slightest evidence of returning galvano-muscular contractility. In two weeks more, however, contractions, almost imperceptible, were observed. These increased very slowly, and it was six months before the muscles responded in the least degree to faradization. At the present time, after a year of the most persistent endeavor, the contractions are considerable, the limb has increased much in size, its circulation is good, and the child can, with the aid of a chair, move about quite readily. I conceive it to be self-evident that if this patient had not been treated with unusual persistency, or if active measures had been delayed much longer, a condition of life-long helplessness would have followed.

In consideration of the *absolute and long-continued paralysis and loss of electric response to either current*, the results have impressed me deeply, and should teach that even desperate cases of infantile paralysis should not be hastily abandoned to their fate.

CASE II. The second case, Mr. C., aged forty, was sent to me by Dr. Malcolm McLean, of this city, with the following history: Last Christmas, without knowledge of special exposure, but subsequent to much mental depression, the patient began to suffer from extreme pain in the lower part of the back and in the hip. A week later, the pain extended down the leg to the ankle, along the course of the sciatic nerve.

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[1] Presented before the American Neurological Association, June, 1879.

The pain, instead of being sharp and shooting, was of a dull, aching character, and though at all times severe, yet frequent exacerbations occurred, rendering him quite helpless. After various methods of treatment, he attended a clinique at the College of Physicians and Surgeons, and submitted to cauterization of the limb, but with no good results. When I saw the patient, two weeks since, he had been suffering six months with no relief, and latterly the symptoms had increased in severity.

On examination I found that firm and prolonged pressure did not *increase* the pain, but afforded, rather, decided relief. On the contrary, slight pressure caused all along the posterior aspect of the thigh *very intense* pain. I was well aware of the probable indications for treatment, but in order to test the case thoroughly I made a careful labile application of the galvanic current, with no good effect certainly, but rather with some increase of pain.

Two days subsequently I resorted to faradization, placing both feet of the patient, that belonging to the sound as well as to the diseased leg, on the negative pole, and using an exceedingly fine current, avoiding all motor points, and carefully refraining from producing appreciable muscular contractions. The patient has been thus treated but three times, and is, as you observe, nearly well.

The points of this case that I wish particularly to emphasize are these: First, that in differentiating between the use of the two currents for the relief of pain the effects of pressure are most useful guides. Second, that while true neuralgia, as defined by Anstie, and pain generally, yields, as a rule, more readily to the galvanic than to the faradic current, the latter is in some cases not only invaluable, but relieves where galvanism is worse than useless, since it serves only to exaggerate the existing distress. Hysterical neuralgias and the so-called pseudo neuralgias, which are simply forms of pain, occupying certain areas, and running, seemingly, in the direction of certain nerves, undoubtedly indicate the faradic current. In these cases it is well known that firm pressure tends to relieve, while light touches aggravate, the distress. This suggestion in regard to the effects of pressure in neuralgia as indicating the proper electrical treatment I have offered before, and have tested it very satisfactorily in many cases. While I do not enunciate it as an unvarying law, it will certainly be found exceedingly useful as a guiding symptom, and the above case of sciatica is, perhaps, as striking an example of its truth as any I have met with.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY WILLIAM B. HILLS, M. D.

TOXICOLOGY.

Antidote for Phosphorus.[1] — Two French physicians claim to have discovered in the slow injection of oxygen into the veins a successful antidote to poisoning by phosphorus. Its action is as follows. Phosphorus has a great affinity for oxygen. When, therefore, it is absorbed into the system its injurious effects are due to the fact that it unites with the oxygen of the tissues, thus producing its dangerous results. If, however, oxygen is introduced into the veins the phosphorus is thereby oxidized, and prevented from depriving the tissues of their oxygen.

Iodide of Starch as an Antidote.[2] — Dr. Bellini, in a paper read before the Medical Society of Florence, recommends the iodide of starch as an antidote to poisons generally. It is free from any disagreeable taste, and has not the irritating properties of iodine, so that it can be administered in large doses. He has made numerous experiments, and states, as a result of these, that at the temperature of the stomach and in the presence of the gastric juice the iodide combines with many of the poisons, forming in some cases insoluble compounds, in others soluble compounds, which are harmless so long as they are not in too large quantity. He recommends it as safe in all cases where the nature of the poison is unknown, and as especially efficient in cases of poisoning by sulphureted hydrogen, by the alkaloids and alkaline sulphides, by caustic alkalies, by ammonia, and especially by those alkaloids with which iodine forms insoluble compounds. In cases of poisoning by salts of lead and mercury it aids the elimination of these compounds. In cases of acute poisoning an emetic should be employed soon after its administration.

Carbolic Acid. — Drs. Langenbuch[3] and Sonnenburg[4] have referred to the dangerous results that are liable to follow the use of carbolic acid in antiseptic surgery. It is in the case of children especially that danger is to be apprehended. According to Sonnenburg, adults suffer chiefly from nausea, vomiting, and headache ; while in the case of children there is collapse, often preceded by restlessness and excitement. During the stage of collapse the temperature in children may fall to 34° Cent. In the lighter grades of poisoning, and preceding the stage of collapse, there may be a rise of temperature to 39° Cent. Sometimes these conditions end in death. In these cases the examination of the urine is very important, in that it enables one to determine whether carbolic acid poisoning is setting in or not. Baumann[1] has shown that a disappearance of the sulphates from the urine goes hand in hand with the development of the symptoms of carbolic acid poisoning, while the quantity of associated sulphuric acid (*gepaarte Schwefelsaüre*) is at the same time increased. When the poisonous symptoms reach their height the sulphates will be found to have disappeared entirely. (For the tests for the salts of sulphuric acid and associated sulphuric acid see the JOURNAL, January 4, 1877, page 14.) Baumann has further shown that, if sulphate of soda is administered to an animal suffering from symptoms of poisoning by carbolic acid, a non-poisonous phenol-sulphuric acid is produced, so that sulphate of soda or any soluble sulphate is a direct chemical antidote to carbolic acid. Sonnenburg gives a list of cases in which symptoms of poisoning followed the use of carbolic acid, and in which the sulphate of soda was administered. In some of these cases the grade of poisoning was so high that the urine had the dark color characteristic of this form of poisoning, and the sulphates were entirely wanting. The general result of the treatment was that the bad symptoms disappeared, the urine became normal, and it was possible in most cases to continue the dressings as before. The dose which he recommends is, for adults, a tablespoonful each half hour of a solution containing five parts of the sulphate of soda in one to two hundred parts of water; for children, the same amount of a solution containing four parts in two hundred. Lately, Dr. Sonnenburg[2] has made the discovery that in these cases of poisoning repeated dressings with a five per cent. solution of sulphate of soda are a very efficient antidote. The urine, which at first is of a dark green color, with a slight brown tinge, soon assumes a normal color, when the dressings with carbolic acid may be resumed without danger.

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[1] The Canada Lancet, vol. xi., No. 6, 1879, page 184.

[2] The London Medical Record, February 15th, page 81.

[3] Berliner klin. Woch., No. 28, 1878, page 412.

[4] Deutsche Zeit. für Chir., vol. ix. page 356.

Hydrocyanic Acid. — Cases of poisoning by hydrocyanic acid, where the acid resulted from the decomposition of a ferrocyanide in the body, are quite rare, two or three cases only being on record. Dr. Volz, of Ulm, relates a case[3] where the hydrocyanic acid was produced by the action of hydrochloric acid on the ferrocyanide. The body was examined forty hours after death. The post-mortem appearances were essentially those produced by the local action of the hydrochloric acid, though death was without doubt caused by the hydrocyanic acid. Hydrocyanic acid was readily obtained from the stomach by chemical analysis, and the residue after distillation was found to contain ferrocyanide of potassium.

Atropia Poisoning successfully Treated with Morphia. — C. G. Polk,

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[1] Maly's Jahresbericht, 1876, page 60, from Ber. deutsche chem. Gesellschaft, ix. 1, s. 54.

[2] The London Medical Record, May 15, 1879, page 184, from Med.-Chir. Centralbl., March 21, 1879.

[3] The London Medical Record, February 15, 1879, page 79, from the Vierteljahrsschrift für gericht. Medicin.

M. D.,[1] reports the case. The patient was fifty years old. When first seen, the pupils were widely dilated, breathing stertorous, sensibility almost lost, coma profound. The stomach-pump could not be used on account of his condition. Four grains of the acetate of morphia were injected into his arm, and a solution of tannin prescribed. Two hours later one half grain of the sulphate of morphia every half hour was ordered. Four hours later the breathing was much improved; pulse full, though slow and soft, not exceeding 50 per minute. Two grains of the sulphate of morphia were injected into the arm at this time. The next morning the patient was well. The total amount of morphia taken by the patient was ten grains.

Corrosive Sublimate. — Dr. Kobryner[2] reports a case of poisoning from one third of a grain of corrosive sublimate. A young man of twenty-one, under treatment for syphilis, took without sanction two corrosive sublimate pills, containing one sixth of a grain each. A little later he was taken with intolerable burning pain in the stomach and abdomen, and vomiting. His pulse became small, his extremities cold, and face pinched. There was no salivation. He was given iron by hydrogen (which was not retained) and albumen. The symptoms continued for ten hours, then began to diminish, the patient finally recovering. This case is interesting on account of the small amount of the poison which gave rise to the symptoms.

Salicylic Acid. — Dr. Feltz[3] reports the poisoning of a man who took two hundred grams of salicylate of sodium in one month. He took four grams three times daily for seven days; then increased the dose to six grams, and in the last seventeen days to eight grams, three times daily. The symptoms were chiefly frequent vomiting and repeated attacks of very painful headache, preceded by reddening of the neck, face, and head. The pupils were contracted. The symptoms continued for seventeen days after the last dose had been taken. The acid could be detected in the urine for sixteen days. J. W. Compton, M. D., in an article on the Poisonous Effects of Salicylic Acid,[4] gives brief abstracts of a considerable number of cases where dangerous symptoms, and even death, have resulted from the rash administration of this remedy.

Paul Cazeneuve[5] has investigated the subject of poisoning by salicylic acid and salicylate of sodium. According to him, dangerous symptoms may be produced by the acid in doses of twenty grams. It may be readily detected in the urine by chemical analysis. Cazeneuve recommends the following process for its detection, as being simple and exact in its results, and applicable when the quantity of acid is very small. It may be employed not only on the urine and other animal fluids, but on any liquid which may contain the acid. One hundred c. c. of the liquid are evaporated to ten c. c. with the addition of one c. c. hydrochloric acid (to decompose the salicylate of sodium) and thirty grams plaster (*plâtre*). The residue, finely divided by reason of the plaster, is exhausted with chloroform. The chloroform is separated by distillation, and the residue taken up with boiling water. Pass, while hot, through a moistened filter. The acid, if in sufficient quantity, separates from the aqueous solution upon cooling. It is now pure enough to be weighed. If the acid is in too small quantity to crystallize from the hot aqueous solution, its presence may always be made evident by the violet band obtained by carefully pouring upon the suspected liquid a solution of perchloride of iron. In this process the plaster retains the coloring matter of the urine as well as other animal coloring matters. Even if the chloroform withdraws a small amount of coloring matter, it is left behind when the chloroform residue is treated with water.

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[1] The Virginia Medical Monthly, July, 1879, page 304.

[2] The Philadelphia Medical Times, November 9, 1878, page 60, from Bull. gén. de Thérap., vol. ii., 1878, page 75.

[3] American Journal of Pharmacy, March, 1879, page 129, from Ap. Ztg., December 14, 1878, page 205.

[4] The St. Louis Medical and Surgical Journal, August, 1878, page 80.

[5] Journal de Pharm. et de Chimie, March, 1879, page 221.

A Poisonous Crystalline Alkaloid from the Body. — M. Selmi[1] reports the isolation of a poisonous crystalline alkaloid from the viscera of two exhumed bodies. The first body had been buried twenty days, was well preserved, and contained a considerable quantity of arsenic. In examining for the alkaloids he obtained, by means of ether, from the extract made alkaline with baryta a small quantity of an alkaloid. This, after purification, had an alkaline reaction, a pungent, slightly bitter taste, and crystallized readily in needles. Its salts were also crystalline. It reacted like the alkaloids. With sulphuric acid it gave a reddish color; with iodic acid and sulphuric acid a liberation of iodine and a violet color; with nitric acid it was colored yellow.

A short time after, M. Selmi extracted from another body a larger quantity of a crystalline product, also presenting an alkaline reaction. This alkaloid was separated by concentrating *in vacuo* the alcoholic extract to seventy cubic centimetres at 35° to 45° C., treating with baryta and ether, evaporating off the ether, taking up the ether residue with water acidulated with acetic acid, filtering, evaporating to dryness, again taking up with water, and treating with baryta and ether. The ether residue contained the alkaloid almost colorless. This alkaloid gave a white precipitate with tannic acid, a brown one with iodine in hydriodic acid, a white one with corrosive sublimate, and a yellow one with picric acid. It formed with acids crystalline salts, and gave with platinic chloride yellow crystals. This alkaloid produced in a frog very marked poisonous effects, similar to those caused by "*ptomaines*" of a poisonous nature.

(*To be concluded.*)

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[1] Journal de Pharm. et de Chimie, February, 1879, page 156.

REPORT OF THE MIDDLESEX EAST DISTRICT MEDICAL SOCIETY FOR 1878.

F. WINSOR, M. D., REPORTER.

THE Middlesex East District Society has held monthly meetings during the past year, as during several previous years. At two of these meetings addresses have been given by physicians from outside the district; but as the same lectures have been listened to by other medical societies, whose members are also members of the state society, any further mention of them seems foreign to the purpose of a district report.

From the many papers, reports of cases, and discussions, the reporter selects and summarizes the following: —

Drunkenness in Parents. — DR. F. F. BROWN, of Wakefield, read a paper on the connection between drunkenness in parents and disease in their children, which was very suggestive, and elicited much discussion. Circulars had previously been sent to members, inquiring what had been their experience: (1.) As to intemperance in parents tending to implant marked appetite for alcohol in their children. (2.) As to intemperance in parents tending to produce disease in their children by heredity, apart from the influences of privation and exposure, to which such children are peculiarly liable. (3.) As to the effect on nurslings of the use of malt or stronger liquors by their nurses. It was the general opinion that the children of intemperate parents inherit an unusual appetite for intoxicating liquors and drugs, and a number of members gave instances in their own experience sustaining this opinion. The experience of members also furnished many instances corroborating the impression that the children of drunken parents are peculiarly liable to hereditary disease, especially to the neuroses running from neuralgia to idiocy. The question was raised whether appetite for alcohol may not be an evidence of this neurotic taint in one generation, which in a later generation manifests itself in chorea or insanity, instead of drunkenness being the origin of all.

Several gentlemen related independent cases of large families, the parents of which were intemperate during a portion only of their married lives, where the mental and bodily condition of the successive children improved or deteriorated, *pari passu*, with the habits of the parents. And furthermore, this was sometimes observed in families whose pecuniary circumstances were independent of the habits of the parents, so that the offspring of the drunken portion of the married life could not have suffered from privation or exposure.

The limited experience of the members present corresponded with the large experience of specialists, from whom Dr. F. F. Brown quoted in his paper. But the essayist stated that he is satisfied that there are as yet no data from which it is possible to determine how strong the heredity in question is. From the statistics of asylums and almshouses, it may be proximately calculated how many insane or idiotic inmates had drunken parents; but we have no means of showing what per cent. of the children of drunkards are of unsound or feeble mind.

Iliac Inflammation in a Male. — DR. W. S. BROWN reported a case of inflammation in the right iliac inguinal region in a man, which was followed by extensive sloughing, extending to the scrotum and laying bare both testicles. The external inflammation was supposed to arise from perityphlitis. The patient recovered, and is now at active labor. To expedite the process of repair in the denuded regions, five hundred skin-grafts were employed.

The same gentleman read an interesting paper on Ovariotomy, which was printed in the JOURNAL for January 9, 1879.

Opium Habit. — DR. S. W. ABBOTT, of Wakefield, made a report on So-Called Antidotes to the Opium Habit, showing that these extensively advertised nostrums all contain opium in some form, and are certain to confirm the habit which they promise to cure. Chemical analysis fully sustains the charge made by *each* of these nostrum venders against all his fellows, namely, that the so-called "opium cures" contain opium in very large quantities, and are the most mischievous class of quack medicines. This paper was a prosecution of the work begun a few years ago by the Cumberland Medical Society of Maine. It adds seven more names to the list of impostors published by them, and it is to be hoped that Dr. Abbott will extend it still further, and lay the result of his work before our state society.

Turning versus the Long Forceps was discussed at length one evening, three gentlemen giving their experience in a number of cases where turning was successful after the forceps had completely failed to deliver, or with patients whose previous labors had with difficulty been terminated by forceps. They incline to the opinion that it is not only easier and safer for the mother than the long forceps, but quite as safe for the child. Most members present were in the habit of using forceps in all head presentations where nature failed to bring down the head, and were not ready to admit that turning can be more successful. The discussion was animated. The advocates of turning maintained that it can be done earlier, which was admitted, — no member approving of the application of the forceps when the head is at the brim and the os less than half dilated; that it allows the head to adapt itself to the irregularities of the pelvis better than is possible when it is held in the forceps; that with proper manipulation no dangerous traction need be made on the child's neck. It was with regard to this last point, and also on the question of compression of the cord in delivering by the lower extremities, that issue was most strongly taken. One of the advocates of turning gave the authorities in its favor, as furnished by *Braithwaite's Retrospect* for twenty years (Simpson, Braxton Hicks, Barnes, and others, and especially, and to an unqualified degree, Figg, in 1859). These writers claim for turning, in cases where the head is arrested at the brim, the following advantages over the forceps, in addition to those already enumerated, namely: turning gives the best means of determining whether the disproportion of the head to the pelvis is so great as to demand craniotomy; and it gives the best chance for craniotomy, if that operation prove inevitable. No member had fairly tried bimanual version, as recommended by Braxton Hicks.

Though such a discussion makes no immediate converts, it is certain to lead to a more extended trial of the method of the minority, with that result most to be desired in medical practice, — a wider experience from a greater number of independent observers.

Placenta Prævia; Twins. — **Dr. J. M. Harlow**, of Woburn, reported a case of placenta prævia, with twins, where the mother and both children were saved. The patient, a multipara, about a fortnight before full term, awoke to find herself flowing, without any "pains." Examination found the os undilated, but detected above it a pulpy mass. She was kept in bed for a week without further hæmorrhage, but on the eighth day awoke, flowing severely. The os was then found dilated to the size of half a dollar, and occupied by the placenta, so that no presentation could be made out. Bleeding being no longer free, further dilatation was awaited. In four hours the os was sufficiently open to allow the head to be felt. The membranes were then ruptured. Bleeding was slight, but no pains occurred for half an hour. Then they came frequently and regularly, and in due time a boy weighing six and a half pounds was delivered. The funis was very short, and on examining for the placenta it was detected, as Dr. Harlow at first supposed, in the vagina; but he very soon found that it did not belong to the child he had delivered. It was, however, shortly followed by another placenta; and then the breech of a second child presenting, he delivered it alive, though *ten minutes after its placenta.* It was a female, weighing five pounds. Dr. Harlow judged, from the appearance of its placenta, that about one quarter of it had been detached at the time of the first hæmorrhage, eight days before delivery.

As the bleeding was not alarming, this case was left to mature up to the point when the membranes could be ruptured without disturbing the placenta.

In the discussion which followed the report of this case, it appeared that in four cases of central implantatia of the placenta, which had occurred in the practice of gentlemen present, two had been fatal to the mother. Of a number of cases of partial placenta prævia, about one half had been fatal to the child, and none to the mother. It was the general opinion that, unless the bleeding is so great as to threaten the mother's life, cases of placenta prævia should be left to rest and nature, till the os is sufficiently dilated to allow of rupturing the membranes. Barnes's plan of separating successive zones of placenta did not commend itself to the judgment of any member.

Plaster-of-Paris Jacket. — **Dr. A. H. Cowdrey**, of Stoneham, applied a plaster-of-Paris "jacket" to a child with antero-posterior curvature of the spine; and at the same time showed a "jacket" removed from the same patient because he had outgrown it after several months' wear, during which time he had greatly improved.

Enteric Fever. — **Dr. F. Winsor** reported a fatal case of enteric fever, in which a portion of the rose-spots pursued the normal course, while others persisted, became indurated and acuminated, and somewhat resembled the eruption of acne, a peculiarity mentioned by Roberts, but not by most of the authorities. There was no diarrhœa in this case. Careful examination of the premises, and inquiries into possible exposure of the patient to typhoid poisoning elsewhere than at home, negatived the supposition of the disease having been acquired in the usual way by the alimentary canal. There was, however, clear evidence of exposure morning after morning to cess-pool gas through an untrapped sink in the kitchen, where the patient made the fire and cooked breakfast. In the discussion which followed, the question was raised whether the case was not one of those which an English authority has recently named "sewer-gas fever" rather than typhoid.

Two very instructive cases, — one of tumor of the brain, the other of chronic ulcer of the duodenum, — reported by Dr. J. M. HARLOW, who also showed the post-mortem specimens, have already appeared in the JOURNAL.

JEFFRIES ON COLOR-BLINDNESS.[1]

THOUGH nearly ninety years ago the English chemist, Dalton, gave an accurate description of the defect which for a long time bore his name, though others from time to time investigated and wrote on color-blindness, and devised means for detecting the anomaly, until the past few years it was very generally regarded so exceptional as to offer rather a scientific than a practical interest. Indeed, it may be said to be only since the publication of Holmgren's book, in 1877, that its frequency and the practical importance of its recognition have been fairly appreciated even by those who might be expected to be specially informed. Holmgren so modified a method for its detection, proposed by Seebeck forty years before, that it became possible to examine large numbers of persons with small risk of error and little expenditure of time. He moreover presented evidence that in Sweden, at least, a considerable per cent. of the male population are color-blind. The numerous papers on the subject that have since appeared, and the extensive statistics that have been collected, chiefly on the continent of Europe, indicate how great an interest was awakened by this publication. An equally large percentage of color-blindness with that found in Sweden has also been discovered to exist in several other parts of Europe, and, through the investigations of Dr. Jeffries, in America.

In the book before us Dr. Jeffries has given a full and accurate account, written for the general public as well as the medical profession, of the present state of our knowledge in this direction. Cases illustrating the mistakes made by the color-blind are given, and a chapter is devoted to explaining the classification according to the Yomag-Helmholtz theory. The fact that color-blindness may be caused by diseases or injury, and especially by the misuse of alcohol and tobacco, is referred to. Interesting examples are related of hereditary transmission, and the tendency sometimes manifested by this, as by other hereditary peculiarities, to skip over one generation and reappear in the next. It is proven by numerous statistics gathered from many countries that in general terms one of every twenty-five males is blind for red or green, while the very small proportion of females thus affected presents a striking contrast.

The dangers on railroads and the ocean from color-blindness are strongly, but not too strongly, insisted on; the impracticability of changing the signals now universally adopted so as to avoid these dangers is shown; the necessity for the employment of proper means to discover the defect and the fallacies which may attend the use of inefficient methods are demonstrated. Of all tests as yet proposed, the author, in agreement with most of those who have had practical experience in the matter, regards that of Holmgren as best combining the requisites of simplicity, convenience, and accuracy, and copious extracts from Holmgren are presented to explain the principle of this test and the manner of its employment. If the book help to stimulate railroad managers to follow the example set by several of the European governments, and institute a thorough examination of the color sense of their employees, it will have accomplished a good work. It is encouraging to learn that such examination has already been ordered by one of the largest railroad corporations in the country.

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[1] *Color-Blindness: Its Dangers and its Detection.* By B. JOY JEFFRIES, A. M., M. D. (Harvard), Fellow of the Massachusetts Medical Society; Ophthalmic Surgeon Massachusetts Charitable Eye and Ear Infirmary, Carney Hospital, and New England Hospital for Women and Children; Member of the International Periodic Congress of Ophthalmology, American Ophthalmological Society, Boston Society of Medical Sciences, Boston Society for Medical Observation, Boston Society of Natural History, etc. Boston: Houghton, Osgood & Co. 1879. 8vo. Pp. 312.

EDUCATION OF GIRLS.[1]

DR. ALLEN, in this paper, touches upon matters of extreme importance, and his conclusions and advice are such as meet with our hearty concurrence. While admitting the desirability of a thorough education for girls, he laments the loss of those opportunities for physical exercise which were open to all, and were employed by most, in a generation preceding our own. "Once it was customary for the girls in our New England families to do much domestic labor, commencing quite early in life. They were trained up to it, year after year. Some part of this labor was hard, and its performance made a severe tax upon the muscles. In this way the constitution of girls became strong and vigorous, capable of much endurance. Besides, schools were formerly continued only about half the year, and then, in the intermediate time, girls found an abundance of exercise in work. One of the most unfortunate events or sentiments that ever befell any people was the change in feeling and opinion that came over our New England women in regarding domestic work as menial and degrading. Had this notion been confined to hired service — for that only which received regular pay — this injury would not have been so great. But the notion or sentiment has gradually been taking possession of the minds of our New England women, especially girls, that domestic labor, wherever performed, is degrading, is not fashionable, and that any other kind of work or business is preferable."

Those who are interested in the health of the rising generation will generally agree with the above opinions. It is, of course, eminently important that our schools, grinding as they do (and will continue to do) forty weeks in the year, should be made thoroughly wholesome places to live in. It is, however, only too palpable that more harm comes from unreasonable and unwholesome customs of living within the control of parents than from anything that is done inside of the school. And, moreover, if the school claims too many hours and days of the pupils, — time which ought to be devoted to *growing*, — it is pertinent to remark that the claim is thus made in answer to a public sentiment which requires it. *We* are responsible for this, and not (God save us!) the poor, gasping school-teachers.

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[1] *Education of Girls, connected with Growth and Physical Development.* By NATHAN ALLEN, M. D., Lowell, Mass. Read before the American Institute of Teachers, July 10, 1879.

But from both sides of the question it appears to many thoughtful persons that the work the schools do is but a half-way operation. In respect to mental development, we will not stop to speak at large of the results of modern schooling; our readers are familiar with the complaints of "acquisition forcing education into the background." In respect to physical development, we hope the doctor's protests and claims may have the force they deserve. Especially do we hope that they may result in influencing those who *set the fashion.* This done, the whole work will be done.

POOLE'S PHYSIOLOGICAL THERAPEUTICS.[1]

THIS book represents the work of a compiler, and shows marks of very careful study and well-considered deductions. Dr. Poole here seeks to explain the action of remedies from a physiological stand-point: for instance, one of the main supports of his theory is that of the "inherent and independent contractile power of muscular tissue." This, he asserts boldly, has long found a place in medical literature, and quotes from many standard authorities on physiology to prove that most of these writers have admitted this fact in nature. Our author states that he would simply extend the doctrines which have been freely accepted and taught by leading physiologists, and apply these to the action of drugs. Next he calls attention to the influence of the nervous system in regulating or restraining muscular contractile power, and especially insists that this influence is restrictive and not initiatory. We cannot within reasonable limits do justice to the author's views, which he has given in a very condensed form, and supports with numerous quotations. It is sufficient to state that the theory is one well worthy of a perusal, and withal quite interesting. If we are to admit the truth of the present knowledge of physiology, the theory that he seeks to establish leads the way to a rational system of therapeutics.

ROSENTHAL ON DISEASES OF THE NERVOUS SYSTEM.[2]

WE are pleased to see an English translation of Professor Rosenthal's excellent book, and especially in a form which must place it within the student's reach.

The original work, in its later editions, has long been recognized as an intelligent, sensible, and comprehensive, even though not a masterly, treatise, and great as has been the flood of books, large and small, upon this subject, within the past few years, there has been none which, from its size and the excellence of its matter, has been better adapted for the use of students and general practitioners.

[1] *Physiological Therapeutics: A New Theory.* By THOMAS W. POOLE, M. D., M. C. P. S. Ontario, Toronto. Published by the Toronto News Company.

[2] *A Clinical Treatise on the Diseases of the Nervous System.* By M. ROSENTHAL, Professor of Diseases of the Nervous System at Vienna. Translated by L. PUTZEL, M. D., Physician to the Class for Nervous Diseases Bellevue Hospital, etc., etc. New York: Wm. Wood & Co. Pp. 271.

Professor Charcot, of Paris, has thought well enough of it to welcome the French translation with a friendly and discriminating preface, which is translated with the present volume. The book is not such pleasant reading as that of Professor Wilks, of London, but it is a better compendium, and the student who has the two will be, for the present, well equipped.

We are also pleased to be able to praise the work of the translator, though we cannot do this without a reservation. His ability and intention to translate well are shown by the general clearness and smoothness of his style. Yet Germanisms and slightly awkward sentences crop out on almost every page. It is a pity that a good job should be blemished by want of care at the moment of its completion, or that writers of medical English should assume that their readers have only a scientific, not a literary sense. We cannot fairly accuse Dr. Putzel of this last fault, however, for with one more revision his translation would have been excellent. J. J. P.

FARQUHARSON'S THERAPEUTICS.[1]

THE first edition of this work received from us an extended notice. The present additions and revisions contain a succinct account of the teachings and clinical experience of the last two years. We note especially the article on salicylic acid, which is a very fair *résumé* of our present knowledge. This second edition of the work possesses an advantage over other therapeutical English treatises in the fact that the doses of drugs are presented in the metrical system as well as in the apothecaries' weights and measures. Some of the additional matter in the preliminary portion of the book is well worthy of attention, especially what is said on page 28 in reference to "idiosyncrasies" and the "knack" of prescribing drugs which will best relieve the invalid sufferer. We still hold to the opinion that this book is the most convenient manual for the young and intelligent practitioner on account of the side-by-side arrangement of the comparative results of physiological action and clinical experiences. Thus at a glance the indications for treatment of a troublesome set of symptoms may be seen. The occasional introduction of formulæ is very convenient, and oftentimes suggests original combinations of remedies.

REPORT OF THE PENNSYLVANIA HOSPITAL FOR THE INSANE, 1878.

DR. KIRKBRIDE presents this year a report of eighty pages, which contains, besides the usual tables of statistics, much information of practical importance. Many useful hints and opinions are often found scattered through, and too often buried in, asylum reports. Our medical library would gladly receive and bind in convenient form complete sets of asylum reports, which would then be more instructive, and find an occasional professional reader. Superintendents would thereby be encouraged to enlarge upon the medical aspect of insanity.

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[1] *Farquharson's Therapeutics.* A Guide to Therapeutics and Materia Medica. By ROBERT FARQUHARSON, M. D., Edinburgh. Enlarged and adapted to the United States Pharmacopœia by FRANK WOODBURY, M. D. Second American edition revised by the authors. Philadelphia: Henry C. Lea. 1879.

We can notice only two points discussed at some length in this report. Dr Kirkbride replies in part to Dr. Earle's recent statements that the high percentage of cures formerly reported by some superintendents was a mistake due to an over-sanguine temperament, or the including of recurrent cases as cured. Dr. Kirkbride's own record for the year is very good, since of two hundred and thirteen discharged, ninety-one were cured, fourteen much improved, forty-one improved, and twenty-eight stationary. Deaths, thirty-nine. He thinks recovery from insanity may be real if it is not permanent; and even frequent recurrences should not vitiate the record, if the patient has been able in the intervals to assume his ordinary place in society. Fever, rheumatism, dysentery, and other diseases may repeatedly attack the same person, and he may as often fully recover. While one superintendent may be too sanguine, it is possible for another to be too despondent, and each idiosyncrasy may lead to error. But it is better, on the whole, at least for the patient, to take the most encouraging view possible in his case, and of the two errors the optimistic one is preferable. He says, "So far as the experience of this institution goes, all subsequent observation tends to confirm the statement, made many years since, that of all recent uncomplicated cases of insanity, promptly placed under proper treatment, and perseveringly kept so, it may be fairly hoped that about eighty per cent. will ultimately recover."

We are glad to see in this report the emphatic statement of the fact, which it is often necessary to urge upon certain patients, that an insane ancestor or two does not necessarily doom one to insanity. Many a person has been driven to melancholia and suicide by the dread of inherited insanity, who, without the knowledge of his fatal inheritance, would have escaped. There are many encouraging facts in favor of immunity from hereditary mental disease, which need to be constantly kept in mind. For instance, insanity is just as likely to occur in an individual of bad education and personal habits, or in one enfeebled by ill health under the ordinary shocks of life, as in one who, forewarned by ancestral insanity, takes every precaution to avoid its exciting causes.

T. W. F.

THE SCHOOLS.

The Association of American Medical Colleges was formed three years ago, at the time of the Philadelphia meeting of the National Association. Its objects were the advancement of medical education in the United States and the establishment of a common policy among medical colleges in matters of college management. Each college is represented by one delegate having a right to vote; all colleges can become members, but any one violating the rules will, if charges are preferred and sustained against them, forfeit membership. These rules, termed "articles of confederation," and going into full force the coming season, provide for a careful adherence to the old three-years'-course plan, namely: There must be but one "regular" annual course; the length of each course must be at least twenty weeks; candidates for graduation must have studied medicine three years, having attended two "regular" sessions. The third-year studies may terminate three months before the expiration of the full three years. Article V. is devoted to fees, and contains seven sections regulating carefully what shall not be done in the way of making tuition easy for the student. Each college is obliged to make an annual report and to publish the rules in its catalogue. The second annual meeting was held at Buffalo. We find one college arraigned for conferring an honorary degree upon a person only twenty-eight years old, forty being the minimum age; but the delegate of that college explaining that they had utterly forgotten this provision of the law, the faculty was "let off." Charges were preferred and adopted against the Nashville Medical College for giving two graduating courses in one year; but similar charges, introduced at the third annual meeting, against the Kentucky-Louisville school fell through, owing to an informality. A communication from the Pennsylvania state society, favoring preliminary education, was laid upon the table. The Dartmouth school was obliged to withdraw, being unable to comply with the provision exacting a term of twenty weeks. It will be remembered that this school holds its "regular" term in the summer. At the next meeting the question of obliging students to take three collegiate courses instead of two will be discussed. This was brought forward by a motion made at the Convention of Medical Colleges, held, independently of the association, this spring, at which the preliminary examination was looked upon with favor.

To any one who reads carefully the proceedings of this association it will be evident that the object has been not so much to introduce any new plan of medical education as to exact a faithful adherence to at least a minimum standard, and to eradicate abuses which are as ingenious as they are gross. The association appears to be of a mutual protective character, designed to keep enterprising faculties from underbidding one another, and not a body bent upon true progress in medical education. Such an organization pulls downwards as much as it lifts upwards. Indeed, it would be difficult to arrange so that it should be otherwise, and for this reason we believe that the only road to improvement lies in the action of individual schools. Whether this body succeeds in enforcing its provisions or not, it will have accomplished something in exposing the absurd farce which has been enacted by many bodies in the name of medical instruction.

In glancing at the announcements for the coming year we observe that the University of Pennsylvania advertises a preliminary examination, to be held for the first time in 1880. The only weak point in its plan is the length of the regular term, which is but five months. Yale, on the other hand, in adopting the graded course this year, requires attendance during two full academic terms, from October to July. It also requires the preliminary examination, which includes mathematics in addition to the usual tests. The Chicago Medical College has been the apostle of the graded course for twenty years, but it does not appear from its announcement that this is not optional; the term is also the short five months' one. The Woman's Medical College of Chicago — an outgrowth of the former institution, owing to the failure of the experiment of the coeducation of the sexes there — is conducted on a modification of the old plan, the two years' course of lectures being divided into a junior and a senior course, the students being advised to follow the order suggested. The Cincinnati school has a voluntary graded system of four years' standing. The system at Syracuse is essentially the same as that which obtains at the

Pennsylvania. The McGill University at Montreal has a preliminary examination, including arithmetic, algebra, and geometry; the course is of four years' duration and "graded," but the sessions are of but six months' length, thus giving less actual instruction than Harvard does in her three years. At the latter university a fourth year is already being talked about. In New York there is not as yet a single ray of light to illumine the darkness.

MEDICAL NOTES.

— Since the opening of the quarantine season, June 1st, there have been detained thirteen vessels out of three hundred inspected. These thirteen have come from infected ports, and some of them have had cases of yellow fever on board during the voyage. Only one man has been removed to the Quarantine Hospital. It would seem that the fever ran its course before reaching this latitude, as all the cases had either died or recovered before getting to port. The vessel from which the man was removed made a very quick passage, coming from Cuba in ten days, and he was convalescent when he arrived.

— In the St. Petersburg *Medicinische Wochenschrift* for June 24th is a lengthy report of Professor Manassein's experiments with cold enemata as antifebrile agents. They seem to have been very effective in bringing down the temperature. A litre of water is used at a temperature of 41° F. to 54° F.

— Koebler, having had long experience in the use of this form of treatment, recommends hot applications to the head in uterine hæmorrhages. He uses bags of sand of such high temperature that the hand can hardly bear it, but the patient bears it well. In any form of acute anæmia, the treatment is equally successful. Hot oats would answer as well, and be much lighter.

— Mr. Charles Frederick Maunder, surgeon to the London Hospital, and well known as operator, teacher, and writer, died suddenly July 11th. — Within one week, during the month of June, four distinguished scientific men died in Germany: in Berlin, Professor Koch, botanist, and Kröing, professor of physics; in Wiesbaden, Professor Neubauer, chemist; and in Greifswald, Professor Trommer. — The death of Dr. Batut, professor of clinical surgery in the School of Toulouse, and of Dr. Faivre, professor of botany and dean of the faculty of Lyons, is also announced.

NEW YORK.

— The New York College of Pharmacy has established a bureau for the examination of apothecaries' weights, to be placed under the authority and control of the Board of Pharmacy of the City and County of New York, and has provided itself with special balances and standard sets of troy and decimal weights, which have been compared with the United States standards in the Bureau of Weights and Measures of the United States Coast Survey office, at Washington, and which have been pronounced in the certificate of Professor J. E. Hilgard to be unusually exact. These weights will be used in the examination and verification of decimal, troy, or apothecaries', and all other kinds of weights. For this purpose a special stamp has been adopted, which will be used for stamping all the correct weights contained in any one set. In order to supply reliable and approved sets to those persons whose weights are found incorrect, the college will keep on hand sets of weights specially made for the purpose, which have been ascertained to be reliable, and have received the stamp of the college.

— An unusual form of death has just occurred in the harbor. James Jenkins, one of the most experienced divers in the country, was engaged in endeavoring to attach a chain to a sunken anchor lying at the bottom of the ship channel between Governor's and Ellis islands, where the water is about seventy-five feet deep, when suddenly the air-tube of his armor burst, and the suit at once collapsed. As soon as the accident occurred he was promptly hauled up by his comrades, but he was dead when they got him into the boat. He was seen to be bleeding from the nose and ears, and death was probably caused, not so much by the length of time that he was without air, as by the pressure upon his body of the collapsed armor suit, which had two hundred and fifty pounds of metal about it.

— George Pintler died in July, at Whitelake, more than a hundred and nine years of age. He was born in Newton, New Jersey, December 28, 1769, and his father was a soldier in the revolutionary war. It is stated that he voted for Washington in 1792, and has voted at every presidential election since. His brother died in February last at the age of ninety-nine years.

— A new free swimming bath has just been opened off the Battery, which is the finest of the city's baths. It has a tank about fifty feet square, and sixty dressing-rooms, and is lighted with gas. During the week ending August 2d the number of persons who availed themselves of the privileges of the public baths was 272,692,— 161,969 males and 110,723 females.

— The proprietors of two rival shops on Second Avenue, one of whom dispenses milk at four, and the other at three, cents a quart, have been arrested on charges of selling adulterated milk, on the complaint of Inspector White, of the health department. Information concerning them was furnished by a man, who stated that one of his children had died from cholera infantum, due, it was supposed, to the use of impure milk purchased at one of these shops, and that two others were sick from the same cause.

CHARLESTON, S. C.

— In common with most of our Southern cities Charleston has been visited by the recent tidal wave of intense heat. For three days the thermometer stood at 106° in the shade, and even higher in the interior of the State. In one day no less than seventeen deaths from sunstroke occurred in Charleston, yet during all this oppression and distress the total death-rate was thirty-nine; that is, nine whites and thirty colored, including three still-borns, and also two from old age, one between eighty and ninety, and one over one hundred years. This gives among the colored one death to every nine hundred, the greatest mortality being among infants, but only one to every three thousand among the white population. The only fever case was a child with remittent, which died. The return of much lower temperature within the last few weeks furnishes the following statistics for the week ending August 2d: Deaths from all causes, including still-borns and old age, forty-five; that is, sixteen whites and twenty-nine colored. As twenty-six of these were infants, there really were only nineteen total deaths at over five years of age, that is, ten whites and nine blacks, for a population of fifty-seven thousand. The causes of death were convulsions, marasmus, cholera infantum, congestion, and phthisis; one child died from eating concentrated lye. In prevalence of heat so great, and of filth which may always be discovered in a population of this size, if sought for, it becomes very proper to attend to so remarkable a bill of health, since there are those who are ever ready to ascribe every epidemic in our latitude to a certain range of temperature, a high or low due point, moisture, and organic decay.

ST. LOUIS.

— Thus far there have been but three cases of yellow fever in St. Louis, and these occurred in persons coming from Memphis.

— Quarantine Hospital has been thoroughly garrisoned, and boats coming from the South are obliged to undergo inspection at that point. At present there are three cases of yellow fever there, two of which are convalescent.

— The refugees from Memphis in St. Louis are holding meetings, and are contributing largely for their suffering fellow-citizens; this burden, however, should not be borne only by those who have been driven from home by the scourge, and whose financial condition has been very much crippled, but also by those of us who have been more fortunate, and undoubtedly it will be. Their condition appeals to all of us.

— All fears that yellow fever will visit us seem to have disappeared.

— It appears that some of our fraternity think that the Western youth have not sufficient medical advantages, though at present there are at least five medical colleges in the city, one belonging to the homœopathic, two to the eclectic, and two to the regular school of medicine, and some five hundred and seventy-one registered physicians in a place supposed to have some five hundred thousand inhabitants, and having the lowest death-rate of any large city in the Union. Nevertheless, Drs. Louis Bauer and Wm. Hazard have inaugurated a new medical college.

— Quite a number of prominent physicians are away taking a summer vacation. Dr. John T. Hodgen is in Ireland, where he will attend the meeting of the British Medical Association as a delegate from the National Association, and also by special invitation. Dr. John Green and Dr. Maughs are also among the absentees, endeavoring to recuperate for their winter work.

LITERARY NOTES.

— Dr. Stephen Smith's new work on the Principles and Practice of Operative Surgery, published by Houghton, Osgood & Co., will appear early in September, at which time we shall give an appropriate notice of it. It is a "new departure" in operative-surgery books.

— *L'Année médicale* is the name of a new annual publication published in imitation of similar periodicals, literary, political, and scientific, which appear in France. In order to make it sufficiently compact only the more important questions in each department of medical science are mentioned. It is edited by Dr. Bourneville, the editor of *Progrès médical.* The publishers are E. Plon et Cie., Paris.

— We have received a number of a new weekly journal devoted to the preservation of health. It is in double columns, with a neat heading. The leading article is by Dr. Charles Denison, On Out-Door Life in Colorado. The objects of the journal are stated by its editor, Dr. Edward J. Bermingham, of New York, to be, first, the publication of scientific and practical papers by eminent sanitarians; second, the diffusion of sanitary knowledge amongst the people.

— The North Carolina Board of Health have issued a pamphlet giving minute directions for performing medico-legal post-mortem examinations. They are adapted from the German regulations of 1877 by Dr. Thomas F. Wood, secretary of the board. The proper method of procedure in cases of suspected poisoning is also given. These papers are intended for the use of the coroners and county superintendents of health of the State.

BOSTON CITY HOSPITAL.

SERVICE OF DR. LYMAN.

[CASES REPORTED BY DR. C. W. HADDOCK, HOUSE PHYSICIAN.]

CASE I. *Chronic Pelvic Abscess.* — Mary A., age forty, entered the hospital October 17, 1878. She was married twenty years ago, and the following year her only child was born; labor easy and recovery good. Three years after she had some severe inflammatory attack in the lower part of the abdomen, and has been an invalid since. For ten years she has suspected "womb difficulty," as she has suffered from bearing-down pains. A second inflammatory attack in the same region occurred seven years ago, after which she wore a pessary for five years. This finally was removed, as it caused discomfort, and for the past two years her symptoms have been aggravated. For a year she has had pain in the back, bearing down, and weakness. Catamenia, though painful, always regular. Five weeks before entrance she began to flow (although menstruation had ceased a week before), and the metrorrhagia continued for four weeks. She now complains of severe pain in the uterine region, dysuria, and constipation. Tongue thickly coated; pulse 84; temperature normal. On examination the bladder is found prolapsed and presenting at vulva. The sound enters four inches through a patulous os uteri. A large, dense mass projects posteriorly in the pelvis and somewhat to the right, and is felt both per vaginam and per rectum, and not fluctuating. From these symptoms the mass was at first supposed to be fibroid. On the 22d, dysenteric symptoms set in, with severe pain and tenderness over the abdomen, frequent and painful micturition, and vomiting. This continued for three weeks, reducing the patient very much. On the 10th of November an examination revealed great sensitiveness upon the left side, and a dense, hard mass in front extending down between the bladder and cervix, with a sense of obscure fluctuation, the mass filling the whole right side of pelvis. Three days later some improvement is reported, the discharges from bowels having ceased, and the patient being more comfortable; but on the 15th a decided chill occurred, followed by fever, sweating, increased temperature, and feeble pulse. The next day there was less tenderness and no fluctuation discoverable, but in the evening a second chill occurred. On the 17th fluctuation was first distinctly felt on the right side.

Bixby's trocar was introduced high up in the vagina, and twenty ounces of thin, fetid pus were obtained, and the cavity afterwards was washed out with carbolized water every two hours. On the 18th, from the elevation of the pulse (124) and temperature (102.8°), it was inferred that there was another collection, and the trocar being reintroduced twelve ounces of thin, fetid pus was obtained. In the evening, thin, dark, offensive dejections came through rectum. Pulse 110, temperature 102°, with considerable pain in the pelvis. She gradually failed, and died on the 20th. The treatment consisted of fomentations, quinine, brandy, and champagne with morphia. The case is interesting from the length of time the effusion had probably existed before the occurrence of suppuration, the multiple abscesses, and the final extension by ulceration into the rectum. It also shows the occasional difficulty of diagnosis. When she entered the hospital, the density of the mass and the absence of fluctuation, the depth of the uterine cavity and the metrorrhagia, were much more significant of fibroid than of pelvic cellulitis.

Autopsy eighteen hours after death by Dr Cutler. The ileum was adherent to the pelvic viscera, and so drawn out as to form a tongue ten inches in length. The lower portion of the large intestine was somewhat ulcerated from just above the third sphincter to the hepatic flexure. The uterus contained a small mucous polypus. There was marked perimetritis in both sides, giving rise to formation of cavities filled with fetid pus. The intestines and pelvis were glued together by comparatively recent adhesion. Both Fallopian tubes were in a part of their course sacculated and filled with serous fluid. The right ovary was degenerated into a number of closed sacs. There were several cicatrices in the vagina, and a perforation from the abscesses in the broad ligament into the rectum just below the sigmoid flexure.

CASE II. *Version of Uterus.* — Mary C., aged twenty-seven, married, seamstress. Entered June 19th, under Dr. Draper. She had subsequently an attack of peritonitis, and recovered in four weeks, with exception of large bedsore. On the 24th of July, upon examination, the uterus was found by Dr. Draper to be retroverted. The cervix was enlarged laterally, but with normal depth. The left side of the body of the uterus was found to be tender, unusually hard and nodular. The malposition was treated with cotton tampons behind the cervix, but the condition of the patient prevented any persistent treatment. October 29th. Vaginal examination by Dr. Lyman showed the body of the uterus retroflexed and firmly bound down. The usual treatment by hot water injections, laxatives, etc., was ordered. November 12th. The organ was raised firmly into place, and kept there by a small-sized Hodges pessary. November 21st. She had an attack of vomiting, with severe abdominal pain and tenderness. This was relieved by morphine, starch enema, and laudanum fomentations. On the 23d there was some febrile action, and blood in the urine. This was treated by liquid acetate of ammonia and spirits of chloroform, followed by citrate of iron and quinine, etc. December 1st. The patient was placed in the genupectoral position, the uterus replaced and surrounded firmly with cotton tampons, which were replaced by a pessary the following day. The patient continued to feel some pain, with slightly increased temperature and pulse, and repeated attempts were made to keep the uterus in place until the middle of February, at which time, so far as her general symptoms were concerned, she was nearly well, but with little improvement in the position of the uterus.

CASE III. *Polypus Uteri.* — Mary McK., age fifty-two, cook, single. Was admitted October 1, 1878. She always had good health until the menopause, eighteen months before, since when she had been weak. A fortnight previously, while making some effort to close a window, she felt a protrusion at vulva, and had since had some bleeding from it. Examination revealed a fibrous polypus, with its stem attached high up in the cervical canal. It was pulled down with vulsellum, and the pedicle divided. No hæmorrhage.

CASE IV. *Epithelioma of Cervix Uteri.* — Mrs. C., age forty, married twenty-two years. Was admitted as private patient October 9, 1878. Her grandfather, father, and three aunts had "cancer." She had had four children; no miscarriages. Since the last child, ten years ago, she had been troubled with lameness in the back and loins. Two years since she began to have occasional watery vaginal discharge, gradually becoming more profuse, and tinged with blood until a year ago, when it became entirely blood. The metrorrhagia occurs sometimes during menstruation, but she thinks she can always distinguish it. It had been accompanied with more or less sharp, cutting pain near the rectum, and a feeling of pelvic fullness. She was quite anæmic, and had lost flesh and strength; had been troubled with hæmorrhoids since the birth of first child. Micturition normal. A journey of twenty miles induced considerable exhaustion and large loss of blood. Examination revealed extensive loss of cervix from epithelioma. Portions of the diseased mass were removed, and the cavity packed carefully with cotton saturated with subsulphate of iron. The patient was soon discharged, with directions to continue the treatment; but six months later she was comfortable, and had had no further hæmorrhages. The case is reported as one of several instances in which the application of subsulphate has arrested the hæmorrhages and checked the rapid progress of the disease, rendering the patient comparatively comfortable.

CASE V. *Epithelioma of Urethra and Base of Bladder.* — Bridget M., age thirty-four, married. Was admitted November 26, 1878. Family history obscure. Has had nine children, the last born a week before admission, and one miscarriage at third month. Eleven years ago, while pregnant, she had some inflammatory trouble about vagina, which disappeared after birth of child. She had been well since until her last pregnancy, during which, three months ago, she complained of pressure in the uterine region, with incontinence of urine, cough, and night sweats, and has lost flesh and strength. Vomiting distressing; dysuria marked. She denies any specific affection. The vulva was a mass of ulceration and excessively painful. This was greatly relieved by injections of carbolized water, strict cleanliness, and separation of the surfaces by cotton smeared with vaseline. On the 28th an examination revealed a transverse opening through the neck of the bladder of about one inch, admitting the finger. The whole vaginal surface of the urethra was eroded, the surrounding tissues indurated and thickened, two deep ulcers on either side of the labia opposed to each other and sloughy. Otherwise, the vagina and cervix were healthy, the latter being still dilated from the delivery. No lochial discharge. During the following month, under tonics, stimulants, and constant injections of a weak solution of carbolic acid, the patient was rendered very comfortable, the vulva healing entirely; but being unable to bear a self-retaining catheter, there was incessantly a constant dribbling of urine. Portions of the tissue examined by Dr. Cutter confirmed the diagnosis. She was subsequently discharged at her own request, somewhat relieved. Visited at her house two months later, the disease was found to have increased rapidly upon the surrounding vaginal surface. The case is interesting from its unusual position.

CASE. VI. *Laceration of Perinæum and Cervix Uteri; Hypertrophied Uterine Mucous Membrane.* — Dora H., aged twenty-eight, married. Was admitted October 1, 1878. She had one child five years ago, from which she "made a slow recovery," and a miscarriage two and a half years ago, at six weeks. Three weeks before entrance profuse leucorrhœa began, and lately she had had every few days pain in the back, with a bright red flow from the vagina. After standing for any time she suffered from distressing pressure in uterine region. No dysuria, but occasional slight increase in frequency of micturition. October 3d. On examination the body of the uterus was found prolapsed, the right side of the cervix torn down to the vaginal junction, with strong eversion of the mucous membrane. There was also deep laceration of the perinæum, extending to the sphincter. October 4th. After dilatation the interior of the uterus was curetted, and considerable hypertrophied mucous membrane was removed. This was repeated on the 19th, after the ensuing menstruation.

On the 25th, she was etherized; the cervix drawn forward; the lacerated edges thoroughly freshened and brought in apposition by five deep silver sutures and a superficial one of silk. On the 3d of November four of the sutures were removed, and on the following day the last one, the union being perfect.

December 7th. At the termination of a menstrual period she was again etherized; the lacerated edges of the perinæum were thoroughly denuded in the manner recommended by Dr. Jenks, and the mucous membrane of the vagina dissected well back. The denuded surfaces were brought together by silver sutures, the patient catheterized, her knees bandaged together, and she was sent to bed. The following day the patient had a rigor, the temperature subsequently rising to 103°, with considerable abdominal pain. Quinine was ordered every two hours, and the vagina syringed with carbolized water through a double catheter. Catheter passed every four hours.

For several days there was great irritability of the bladder, which, however, gradually subsided, and on the 13th the two lower sutures were removed, and on the 16th and 17th the remainder. 20th. A small opening in the centre of the perinæum was touched with nitrate of silver. January 6th. Both perinæum and cervix were thoroughly united, and the patient was discharged well.

CASE VII. *Laceration of Cervix Uteri.* — Mary C., twenty-eight years of age, married. Entered the hospital October 29th. Has one child two years old. No miscarriages. Two months and a half ago, a fortnight after menstruation, she was attacked with flowing. This lasted several days, large clots coming away. She was confined to her bed for two or three weeks with back-ache, pain in hypogastric region, and a stitch in the right hypochondrium. She had at time of entrance swelling and great tenderness in right iliac region, and during the previous week had had several chills followed by fever. Micturition normal and bowels regular, though defæcation is painful. She also vomited occasionally, and slept poorly on account of pain. Pulse 96. Temperature

99.5°. November 3d, upon examination the cervix uteri was found to be lacerated on both sides, hypertrophied, and the cervical canal everted and very patulous. The sound entered two and three quarters inches. There was also a slight laceration of the perinæum. A portion of hypertrophied mucous membrane was removed from the uterus by the curette, the cavity swabbed with tincture of iodine, and hot douches were ordered twice daily. 19th. No hemorrhage since the 3d. The congested membrane about the os was scarified and tincture of iodine applied.

25th. A series of lumps in the course of the colon were noticed, apparently fæcal. These were removed by small repeated doses of sulphate of magnesia.

December 5th. She was etherized, and the lacerated surfaces of the cervix were thoroughly denuded. The anterior and posterior lips were then placed in apposition, and held there by silver sutures in the usual way. The patient remained perfectly comfortable until the following evening, when she had a severe chill, with offensive vaginal discharge. Pulse 120. Temperature 103°. She had two grains of quinine every two hours, and the vagina was washed out with carbolized water.

9th. Patient more comfortable until this morning, when she had two chills, followed by cold sweats; but the temperature was only 99°, and the pulse was good. There was also some mild delirium. Stimulants and quinia were ordered, and on the 10th the delirium had ceased, and she was very comfortable, though somewhat weak and discouraged.

13th. Another chill occurred last evening, the temperature rising to 103°. the pulse being only 78. Some pain and tenderness over the abdomen. Four of the sutures were removed, and the quinine continued. 19th. The patient steadily improved, and to-day was menstruating. 22d. The menses ceased, and the remaining sutures were removed. 28th. Cervix perfectly united, and the patient discharged well.

MEDICO-LEGAL NOTES.

DAMAGES.

In a town in Grafton County, N. H., A. P. N. claimed to have been injured by a defective highway; that in consequence of said injury the right shoulder and elbow joints were painful and completely immovable; had the arm lashed to the body, and the fore-arm supported across the body, with hand as high as the left axilla. He demanded four thousand dollars damages. Dr. Tuttle, of Littleton, N. H., and Dr. Allen, of White River Junction, Vt., were requested by the town officers to examine the case. They did so, administered sulphuric ether, and found the joints perfectly movable, and apparently perfectly healthy. The claim was at once settled for seventy-five dollars, and the man was cured.

SHORT COMMUNICATIONS.

THE SIGNIFICANCE OF DIPLOPIA.

That diplopia is not very uncommon most medical men can testify. Its presence may excite solicitude when it is binocular and seems due to some intra-cranial or intra-orbital cause, as by the pressure of a tumor on one of the oculo-motor nerves, or on the eyeball itself.

Binocular diplopia resulting from other causes, as temporary local paralysis, the unfortunate result of a tenotomy for the correction of strabismus, etc., need not be considered here, as examples of monocular diplopia or polyopia are more commonly the ones met with, and it is this variety that will be dwelt upon. By no means seldom, patients having an excess of mucus in the conjunctival sac, due to an inflammation of the conjunctiva, and very likely of the tear passage, complain at times of diplopia on looking at objects near to, as in reading. The same annoyance is sometimes produced by pterygium, irregularity in the curvature of the cornea after a wound, coloboma of the iris (a congenital slit, due to arrest of development), luxation of the lens, and congenital irregular astigmatism. It has been frequently observed by oculists in incipient senile cataract.

In my notes, taken in the last three or four years, of the examinations of ninety-two patients having ordinary incipient cataract, the following abnormalities are recorded: diplopia, nineteen; myopia, four; polyopia, two; irregular astigmatism, five. Males, ten; females, twenty. Of the thirty persons who noticed refractive defects, twenty-five were private patients, while but five of the thirty cataract patients seen at the Salem Hospital had remarked anything abnormal. This was possibly due to a want of observation on their part, and the same reason may have accounted for the small number of males who reported visual troubles. The writer is aware that these few examples are insufficient for any statistical value, but their publication may tend somewhat to allay alarm at the presence of diplopia (as in seeing " two moons ") in a person who has previously enjoyed both health and sight.

A word as to the cause of this form of double sight. It is well known, at least among specialists, that in the beginning of senile cataract the affected eye may become myopic by the alteration in the curvature of the lens, brought about, perhaps, by a swelling of its substance, owing to some defect in exosmosis through the capsule. (This state of refraction is sometimes so marked that — as has occurred in two of my patients — a very considerable degree of help to vision is found by wearing concave glasses.)

So, too, diplopia, polyopia, irregular astigmatism, etc., are doubtless occasioned by an irregular swelling or imbibition of certain sectors of the lens. That it is monocular, and is not dependent on any central trouble, is found by alternately closing first one eye and then the other. In binocular diplopia vision becomes single on closing either eye, while in monocular diplopia the vision is single only when the affected eye is covered.

SALEM, MASS. DAVID COGGIN, M. D.

PSEUDO-HYPERTROPHIC PARALYSIS.

MR. EDITOR, — In Bath, Grafton County, is a case of pseudo-hypertrophic paralysis in a male aged fourteen years. The muscles of the thighs are affected. The disease has been in progress three years, and there is now complete paralysis of all the muscles of the legs. No similar affection in the family, near or remote. The boy often " went swimming," and had a severe contusion upon the lower spine some time before the symptoms of paralysis appeared. Treatment by massage and electricity has been without good result. These cases are so rare that I have thought it worth reporting. The case has been seen and diagnosticated by Dr. Tuttle, of Littleton, N. H. WILLIAM CHILD, M. D.

YELLOW FEVER.

MR. EDITOR, — I was mistaken about the date of the attack of Louisa Creel by yellow fever at Mississippi City. It should be July 6th instead of July 13th.

No case has sickened here since July 29th. Our dread is rather of inland quarantines than an epidemic. S. S. HERRICK.

NEW ORLEANS, *August* 8, 1879.

AMNIOTIC FLUID.

MR. EDITOR, — I notice in this week's number of your JOURNAL the report of a case by Dr. Wakefield where there was entire absence of amniotic fluid. The case I think well worthy of note, and I would like to see more of such letters from the profession when finding such abnormalities. In a practice of twelve years I have never met with anything of this kind till the present summer, the principal points of which I will give. The first case occurred July 3, 1879. Mrs. B., a primipara, aged thirty-nine and a half years, after a labor lasting only seven hours, gave birth to a female child (eight pounds). Mother and child did well. The second case, July 8th, was a primipara. Mrs. R., aged twenty years, small, but very fleshy, after a labor lasting ten and a half hours, gave birth to a male child (twelve pounds). Ether was given in both cases, and forceps used in the latter. There could be no mistake about the above cases, as I was present from the ushering in of the first symptoms, and constantly by them during the labors. Yours respectfully,

FREEPORT, ME., *August* 9, 1879. JOHN G. PIERCE.

REPORTED MORTALITY FOR THE WEEK ENDING AUGUST 9, 1879.

Cities.	Population estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from				
				The Principal "Zymotic" Diseases.	Diarrhœal Diseases.	Diphtheria and Croup.	Pneumonia.	Scarlet Fever.
New York	1,085,000	710	34.12	38.87	33.52	1.97	3.38	.85
Philadelphia	—	—	—	—	—	—	—	—
Brooklyn	564,400	265	24.48	39.25	30.57	3.40	2.64	.38
Chicago	—	199	—	41.21	27.64	5.53	3.02	1.51
St. Louis	—	140	—	37.71	22.14	.71	.71	—
Baltimore	365,000	164	23.43	31.10	17.07	2.44	.61	4.88
Boston	350,000	222	32.08	54.95	47.30	2.25	2.25	1.82
Cincinnati	280,000	105	19.55	33.33	21.90	1.90	1.90	7.60
New Orleans	210,000	84	20.86	23.81	13.10	1.19	1.19	—
District of Columbia	160,000	83	27.05	31.33	25.30	—	4.82	1.21
Cleveland	—	78	—	46.15	39.74	—	—	1.20
Pittsburgh	—	61	—	47.54	31.15	6.56	4.92	—
Buffalo	—	—	—	—	—	—	—	—
Milwaukee	—	61	—	49.18	49.18	—	—	—
Providence	101,500	51	26.20	45.10	35.30	1.96	5.88	3.92
New Haven	60,000	29	25.20	24.14	17.24	3.45	3.45	—
Charleston	57,000	25	22.87	16.00	8.00	4.00	—	—
Nashville	27,000	11	21.24	54.55	36.36	—	—	—
Lowell	53,300	29	28.36	48.28	48.28	—	—	—
Worcester	52,500	22	21.85	27.27	13.64	4.55	—	—
Cambridge	50,000	30	31.29	40.00	40.00	—	—	—
Fall River	48,500	26	27.95	30.77	26.92	—	—	3.85
Lawrence	38,200	27	36.86	51.85	25.92	—	—	—
Lynn	34,000	13	19.94	38.46	38.46	—	—	—
Springfield	31,500	12	19.86	66.67	50.00	16.67	—	—
New Bedford	27,000	24	46.34	58.33	50.00	4.17	—	—
Salem	26,400	16	31.60	37.50	31.25	—	—	—
Somerville	23,350	13	29.03	84.62	76.92	—	7.69	—
Chelsea	20,800	8	20.06	12.50	12.50	—	—	—
Taunton	20,200	7	18.07	42.86	42.86	—	—	—
Holyoke	18,200	13	37.25	61.54	23.08	7.69	—	7.69
Gloucester	17,100	5	15.25	40.00	40.00	—	—	—
Newton	17,100	—	—	—	—	—	—	—
Haverhill	15,300	8	27.26	25.00	25.00	—	—	—
Newburyport	13,500	5	19.31	20.00	20.00	—	—	—
Fitchburg	12,500	3	12.51	66.67	33.33	—	—	—

Two thousand five hundred and forty-nine deaths were reported (previous week 2437): 1018 from the principal infectious diseases, 796 from diarrhœal diseases, 233 from consumption, 62 from diphtheria and croup, 60 from pneumonia, 37 from whooping-cough, 36 from scarlet fever, 36 from typhoid fever, 29 from bronchitis, 22 from malarial fevers, 13 from cerebro-spinal meningitis, nine from measles, five from erysipelas, one from small-pox (New York). From *whooping-cough* Brooklyn reported 10 deaths, Boston and Pittsburgh five, New York, St. Louis, and Baltimore three, Cleveland two, Cincinnati, Providence, Lawrence, Salem, Holyoke, and Fitchburg one. From *typhoid fever*, Chicago seven, St. Louis six, New York five, Baltimore four, Boston and District of Columbia three, Lawrence two, Brooklyn, Cincinnati, Cleveland, Pittsburgh, Providence, and Holyoke one. From *malarial fevers*, New Orleans eight, St. Louis five, Chicago three, Nashville two, Baltimore, District of Columbia, New Haven, and Charleston one. From *cerebro-spinal meningitis*, New York three, Baltimore and Worcester two, St. Louis, Cleveland, Springfield, New Bedford, Somerville, and Holyoke one. From *measles*, New York five, St. Louis two, Brooklyn and Baltimore one. The cases of yellow fever increased very much in Memphis; one death was reported in Brooklyn. The death-rate of whites in District of Columbia was 17.79; colored 40.86.

The noteworthy changes for the week are a considerable increase in typhoid fever and diarrhœal diseases, and a decline in the mortality from consumption, measles, and scarlet fever. In sixteen of the cities of Massachusetts, with an estimated population of 766,650, there was an increase in diarrhœal diseases.

The weather was hot and dry; the meteorological record for the week in Boston being as follows: —

Date.	Barometer.	Thermometer.			Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather.[1]			Rainfall.	
	Mean.	Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
August 3	29.876	78	91	75	69	51	61	60	W	W	W	11	13	8	F	H	F	—	—
" 4	29.902	73	84	69	71	67	81	73	NW	E	S	6	5	2	F	F	R	—	.01
" 5	29.826	76	90	67	80	62	69	70	SW	SE	S	8	7	8	C	F	F	—	—
" 6	39.761	78	88	69	81	28	49	52	W	W	NW	10	19	10	C	C	C	—	—
" 7	29.809	70	82	60	50	26	70	48	NW	W	W	14	8	7	F	F	C	—	—
" 8	29.816	62	66	60	89	83	100	90	O	E	NE	0	13	5	O	O	O	—	.12
" 9	29.912	64	69	59	94	70	94	86	W	SE	SE	4	5	1	O	O	O	—	—
Week.	29.850	71	91	59				69		W		1407 miles.						8.67	.13

[1] O., cloudy; C., clear; F., fair; G., fog; H., hazy; S., smoky; R., rain; T., threatening.

During the week ending August 16th there were in Memphis 41 deaths and 183 cases of yellow fever, and previously reported, 360 cases and 90 deaths.

For the week ending July 19th, in 149 German cities and towns, with an estimated population of 7,542,903, the death-rate was 25.1 (previous week 27.5). Three thousand six hundred and forty-two deaths were reported: 560 from diarrhœal diseases, 490 from consumption, 282 from acute diseases of the respiratory organs, 94 from diphtheria, 65 from whooping-cough, 53 from typhoid fever, 45 from measles, 45 from scarlet fever, nine from puerperal fever, two from small-pox, one from typhus fever. The death-rates ranged from 13.9 in Metz to 34.4 in Berlin.

For the week ending July 26th, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 17.6, an increase of 0.5 over the previous week. Two thousand four hundred and eighty-nine deaths were reported: 182 from diseases of the respiratory organs, 103 from scarlet fever, 78 from measles, 62 from whooping-cough, 61 from diarrhœa, 42 from fever, 12 from diphtheria, six from small-pox (in London). The death-rates ranged from 10.3 in Portsmouth to 21.4 in Sunderland; London 17.4; Birmingham 16.5; Liverpool 18.6.

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Books and Pamphlets Received. — North Carolina Board of Health. Method for Post-Mortem Examinations. Raleigh, N. C., July, 1879.

A Successful Case of Intravenous Injection of Beef Peptone for Exhaustion from Hæmorrhage from Uterine Cancer. (Transactions of Obstetrical Society of New York.)

History of the Discovery of Anæsthesia. By J. Marion Sims, M. D. (Virginia Medical Monthly.)

Reflex Cerebral Hyperæmia. By C. H. Hughes, M. D. (St. Louis Medical and Surgical Journal.)

The Progressive Attributes of Inanimate Matter and the Purposive Operations of Organic Structures. By A. J. Hawe, M. D.

Guide to the Examination of Urine, with Special Reference to the Diseases of the Urinary Apparatus. By K. B. Hoffman and R. Ultzmann. From the Second Edition. Translated and edited by F. Torcheimer, M. D. With Illustrations. Cincinnati. 1879.

Insane Drunkards. By Theodore W. Fisher, M. D. (Harv.) (Read at the Annual Meeting of the Massachusetts Medical Society.)